

## Syllabus: Human Biology (BSC 105)

Semester: Spring, 2018 (Sections 205, 206, 207)

Lecture Location: Room 374 Science Building (S374)

Lecture Time: Monday/Wednesday/Friday 2:00-2:50 PM

Lab: Room S273; Day/Time depends on section; please attend the section for which you are registered:

**Sec 205: Mon, 10:00-11:50; Sec 206: Wed, 8:00-9:50; Sec 207: Wed, 10:00-11:50**

Instructor: Elmer M. Price, Ph.D.

Credit Hours: 4

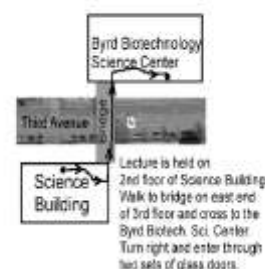
Office: 241Q Byrd Biotechnology Science Center (BBSC)

Office Phone: 304-696-3611

Email: pricee@marshall.edu (Please use the Subject Line: "BSC 105" so I'll know it's an important email; I get dozens of less important emails every day)

Office Hours: Monday/Wednesday/Friday, 1:00-2:00 or by appointment (please use email to arrange) or just drop by my office (241Q BBSC) or research lab (219 BBSC) anytime and I'll probably be able to chat, (unless I'm in the middle of creating bizarre new life forms or performing brain surgery). Every year, students get lost trying to find my office. So, here's a map-----

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Course Description: This course focuses on the basics of human biology, providing the student fundamental knowledge that will help them understand and apply this science in their everyday life, especially in terms of health and disease. For many students, this course may be the *only* biology class they ever take. Every day there are new deadly diseases, vaccines, human clones, stem cells, genetically modified plants and animals, cancer therapies, environmental disasters, performance-enhancing drugs, and other biological phenomena in the news. This course will enable the student to understand, and react to, these potentially life-altering events.

### Required Text

- *Human Biology*, 15th Edition, by Mader and Windelspecht. Published by McGraw Hill.
- *BSC 105 Laboratory Manual*, 2016, by Weinstein

Course Description: Biology is the study of life. Human biology is the study of human anatomy, physiology, genetics, cell and molecular biology. And some chemistry. Oh, knock it off....chemistry is your friend! This class teaches the fundamentals of biology with emphasis on human *health* and *disease*. We will all die due to some biological phenomena. This course will provide students insight regarding how to understand, and hopefully address, these biological mishaps. Intended for non-science majors.

### Course Objectives

- Understand the themes that run through human biology
- Recognize molecular, cellular, tissue, organ, systems and whole body structures and functions
- Understand the scientific method of research and discovery
- Understand the genetic basis of diversity, heredity and disease
- Understand the cellular/tissue/organ basis of health and disease

Course Outcomes	Opportunities to Practice Course Outcome	Course Outcome Assessment(s)
Articulate and describe the basic biological principles	In-class discussions and laboratory exercises	Examinations and quizzes
Discuss and use the scientific approach to solve problems within the field of human biology	In-class discussions and laboratory experiments	Examinations, quizzes and laboratory reports
Read and analyze charts, graphs, and tables conveying scientific information	In-class discussions and laboratory exercises and experiments	Examinations, quizzes and laboratory reports
Collect, interpret, present and discuss scientific data	Laboratory experiments	Formal written laboratory report

**Lecture Attendance Policy:** Attendance is not mandatory. But you will probably fail the class if you miss a lot of lectures. Test questions will be derived from material found in the text, BUT some questions will be from material that is presented in class and *nowhere else*. ***It's not a novel concept: attend class plus read the text!*** Lecture notes will not be available. Lecture recordings will not be available. Come to class. Pay attention. Takes notes. Read the book.

All announcements made in class supersedes information in this syllabus (except tests dates).

Please try to arrive on time. *If the student arrives late, they should quietly enter via the back of the room. It is disrespectful to the class to arrive late and noisily.*

Make-up examinations will be offered in the case of a family emergency, illness, or other university excused absence. Please make every effort to contact Dr. Price prior to the test (email will be fine) to inform him that you'll miss the test. **Students have ONE week to make-up a missed test; not doing so will result in a zero for that test.** The make-up test may not be the same exact exam as that given on the regularly scheduled exam day.

**University-excused absences:** If you miss three or fewer consecutive days of class, see Dr. Price. If you miss more than three days, please see: Office of Student Affairs. 2W38 Memorial Student Center. 304/696-6422; [studentaffairs@marshall.edu](mailto:studentaffairs@marshall.edu).

**Lab Attendance Policy:** The laboratory component of this class is a critical part of the learning objectives for Human Biology. The lab provides a “hands-on” experience that enables the student to appreciate the applicability of basic biology to scientific discovery. The labs cannot be made up if they are missed. If a student misses a lab due to a university excused absence, that particular lab grade will be excluded from the final grade calculation, but *only up to three*. If a student misses more than three labs, excused or not, they will receive a “zero” for the additional labs that are missed and these “zeros” will be included in the final grade calculation. ***If a student misses five labs in total they will automatically fail the course.*** The rationale behind this policy is that if a student misses five labs it stands to reason that they are in a situation that warrants withdrawal from the class, and possibly from the university.

**Cell Phone/Electronics Policy:** Use your Smartphone/tablet/laptop to text and surf social media all you want during class. Yes, that's right. I give up. But, if you use your Smartphone/tablet/laptop **excessively**, and I deem it is a distraction, there will be consequences too horrible to put into writing.

Note: *No electronic devices, EVER, during tests.*

Grading Policy: There will four multiple choice exams which includes a comprehensive final exam. You will be tested on material from the lectures and the book; all four tests comprise 80% of your final grade. Laboratory performance will contribute the remaining 20% of your course grade. Quizzes will not be given unless attendance begins to drop.

Tests will be given on the dates listed on the Schedule. All tests (except the final exam) will be administered during the regular class time. Not all tests are weighted the same:

- Test 1 = 15% of final grade
- Test 2 = 20% of final grade
- Test 3 = 20% of final grade
- Test 4 (Comprehensive Final Exam) = 25%
- Laboratory = 20% of final grade

The final grade: A: 90-100%; B: 80-89.4%; C: 70-79.4%; D: 60-69.4%; F: <59.4%

Students have 1 week after the test scores have been returned to discuss issues with the exam.

### **GENERAL POLICIES**

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy be going to <http://www.marshall.edu/academic-affairs> and clicking on "Marshall University Policies." Or, you can access the policies directly by going to [http://www.marshall.edu/academic-affairs/?page\\_id=802](http://www.marshall.edu/academic-affairs/?page_id=802)

In the case of a fire alarm, students are to leave the building quickly and orderly. In the case of a tornado, students are to move to the hallway, away from windows and doors. MUPD phone number is 696-4357 (696-HELP). Please add this number to your phone's contacts list.

*Students are encouraged to sign up for the automatic Marshall University emergency text messaging system to be notified of emergency situations and other important announcements. To sign up, go to: myMU; log in; click on MU Alert (a red triangle in the Launchpad), and complete the information.*

### **Learning Objectives**

The instructor has several objectives for his students during this semester. They are listed below in order of increasing significance to the student's long-term success in careers and in personal life.

1. The gain of simple knowledge, and any student can achieve this modest objective by simply memorizing the material.
2. A more significant objective is the actual comprehension of the material. Does the student actually understand the material, or are they only parroting the material during the tests. One who comprehends the material can answer test questions using information learned in class, even if the exact question was never discussed.
3. In order to use the information learned in class in future years, the student must be capable of applying the knowledge to new events. An ability to apply new knowledge is a sign of creativity that leads to exceptional careers.
4. Finally, the best and brightest have the capacity to synthesize new paradigms, new theories, and new designs that advance their chosen field. Students must learn to create new ideas, design new experiments, and actually perform the work that yields a new information, discoveries, or technologies.

The tests will be held on the indicated dates, *but the instructor reserves the right to deviate from the indicated chapters.*

## Chapter 4. Organization and Regulation of Body Systems

## Chapter 3. Cell Structure and Function

## Chapter 2. Chemistry of Life

## Chapter 5. Cardiovascular System: Heart and Blood Vessels

## Chapter 6. Cardiovascular System: Blood

**WEEK 6:** February 12 - 16

## Chapter 7. Lymphatic and Immune Systems

## Chapter 8. Infectious Disease

## Chapter 9. Digestive System

## Chapter 10. Respiratory System

## Chapter 11. Urinary System

**WEEK 10:** March 12 – 16 (March 16 is the last day to drop a class)

## Chapter 12. Skeletal System

## Chapter 13. Muscular System

**SPRING BREAK**

## Chapter 14. Nervous System

## Chapter 15. Senses

## Chapter 16. Endocrine System

**WEEK 14:** April 9 -13

## Chapter 17. Reproductive System

Chapter 18. Development and Aging

## Chapter 19. Patterns of Chromosome Inheritance

## Chapter 21. Patterns of Genetic Inheritance

## Chapter 20. Cancer

Chapter 22. DNA Biology and Biotechnology

## Final Exam Week

\*\*\*\*\***FINAL EXAM (comprehensive): Monday, April 30, 12:45 - 2:45**